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FIELD DIARY

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July 20, Sunday.

Had a few specimens to work up and set a lot more traps. Wrote up notes & went in swimming. Very hot and dry and crops are suffering.

July 21 - Went down to Lawrence Lake, just above Brownsville and explored the marsh near the lake and got a good view from above on the hill. A nice little log cabin is located on a point above the road overlooking the lakes which are closed to hunting and are easily protected. There are several bodies of water but the need of dams to throw the creek into them instead of draining them is evident.

July 23 Drove up to Winona and found Ray Steel trying to reach me on the telephone to go up to Wabasha for the conference with the Congressional Committee on Conservation. Frederic Walcott of Univ. is chairman and Senator Harry P. Haves of Mo and Lee Pitman of Nevada are members.

Found the men not all there so had to wait till July 25 for the hearing which took the whole day.

The meeting was at the summer cottage of Mr.

Geoff, of Chicago who made a delightful host. Others present were Mr. Reddinham, Ray Steel, Uhler and myself from the Biological Survey.

Mr. Bates of the Forest Service,
Capt Culler and Mr. Shewaker
of the Bureau of Fisheries,
A couple of senators from Minnesota
and some of our leaders.
Also Mr. Bell of McGregor, Iowa.

In the forenoon

July 25 Gen. Brown, chief of
Army Engineers stopped on
his way down the river
on the steamer General Allen and
had a pleasant conference with
the committee.

When he left the committee was
called to order by Mr. Walcott
and Mr. Reddington asked to tell
about the refuge.

He gave its history and
aims and objects and some of
the administration problems,
then asked me to tell about

its animal life - past,
present ad future.

I began with 1870 when I
first came up the valley in a
covered wagon - when passenger
 pigeons, prairie chickens ad
 white tail deer were abundant
 and then told of what there is
 on the refuge ad what can
 be brought back.

Then Mr. Lebler told of
 the duck foods and aquatic
 vegetation of the refuge ad
 later we were asked some
 questions.

Mr. Culler of the Bureau of
 fisheries made wild statements
 of how many hundreds of young bass
 had been taken from the stomachs
 of great blue herons and wanted
 to have them all killed off.
 Mr. White gave some real figures

L

on this food which showed
them only little harmful to good
fishes and I cited this value in
destroying pocket gophers and
mice in some of the western states.

The food of hawks was discussed.
the predatory animals were asked
about.

Returned to Winona and
caught bus to La Crescent late
in evening.

July 26 Left La Crescent after
noon and went to La Crosse
and down river to Ferryville
but finding no place to stay went
on to Lyndville where we found
convenient quarters near the depot.
This is at the lower end of the
Winnebago bottoms but we can
run back to Ferryville in the morning
to start.

July 27, Found the Game warden at Ferryville and planned a traps for tomorrow, then returned to Ferryville and set traps, took photographs, wrote up notes and got ready for real work tomorrow which will be Monday,

July 28, Went to traps before breakfast and then ran up to Ferryville where the refugee warden, Harley C. Lawrence, went with us with his boat and waded all day across of the upper part of the Wimbleton Bottoms, following the Wimbleton Slough around the closed area and then down ~~through~~ Garden Slough through the middle of it and all both sides into the marshes and lakes and lotus beds where the

Ducks and muskrats live.

The Bottomlands are large and almost all in the refuge, so they form a well defined area for administration and development. They include two large areas entirely closed to hunting and extensive areas outside where hunting and trapping are controlled or open in accordance with state laws.

The refuge area is somewhat different from that of the Wabasha and La Crosse region; more uniformly low and practically all subject to flood in high water.

There is much good timber of the same bottomland trees as farther north but little oak or basswood. Silky maple, birch, elm, ash, box elder,

Cottonwood and willows are the main timber of which there is abundance of cottonwood and willow along the shores. Nut trees are almost entirely lacking and there is doubt of Pecan trees doing well on such low bottoms. Squirrels are there but apparently it is their work eating the bark from silver maples. One fox squirrel was seen and a few gnawed trees.

The surrounding bluff of gulch country is better for squirrels.

The marshes and lakes and sloughs cover extensive areas and are ideal for wood ducks, other ducks, muskrats and such game.

The lakes are generally full of totas (*Nelumbo lutea*) now in full flower and a wonder of beauty and interest. The flowers often grow out on dry ground or solid mud or sand and stand four feet high on waving stems, the beautiful fragrant flowers eight or ten inches across and the rich satin green leaves one to two feet across. Few flower displays are more beautiful, and the abundant nuts from their seeds are valuable duck food.

Crowned the shores and over extensive marshes the tall thin cornered sedge, *Zizaniopsis miliacea*, grows densely and often higher than our heads. its bulb

bearing base or rootstalk forming one of the very important substrat of duck pools.

Scirpus vallis grows in places but less abundant than farther north, while bearded, bullrushes and many other sedges fill up the marsh spaces. There is less grass than farther north.

The three common *Sagittarias* are abundant, *Potamogetons* of many types fill the water in places. *Lemna* and other duck weeds are abundant, wild rice was seen in only a little strip along a shore and it was not tall grown.

Lotus is very abundant in almost pure stands for miles along the margins of sloughs and lakes or over some whole lakes. It is a glorious plant and

forms one of the most attractive flower displays I know of. The thousands of blossoms waving on stems two four feet tall and often 6 to 10 inches apart are delicate pale yellow with orange tipped centers and delicious fragrance while the great hairs, 1½ to 2½ feet across are like green velvet and those standing erect bold silvery globules from the morning dew. That over the water would easily hold up a rail and probably a little greater. My field glasses laid on one did not make a dent in it.

The seeds from their numerous cups must furnish a lot of food for ducks and other birds,

Cooked 3 species of mussels for lunch.

July 29
Covered the lower half of
the Wimeshick Bottoms by boat
making numerous short trips
in the marshes and lakes that
we could not enter by boat.
Went clear around and partly
through the closed area which
is not quite so large as the
one explored yesterday, about
1000 acres roughly while
yesterday the closed area was
near 2500 acres.

It is the same type of
country, low forest and
much marsh and lake and slough
land, wonderful number of
water fowl counted,
Lots of food plants and great
numbers of muskrats, frogs,
crawfish, fish and turtles,
Saw an 800 foot eel

hauled and the game fish,
bass of 3 kinds, sunfish, pike,
and pickerel put back while the
sheepshead, red horse, carp
and dogfish were taken to
market. They would not all
together run over 200 or 300
pounds of fish and I should
think two thirds of these went to
market.

They gave me a sheepshead,
a skipjack and a moonaye to
cook for lunch. The sheepshead
was delicious, the moonaye fairly
good, the skipjack good but
soft and body. I broiled
them on sticks and they were
the best of their kind.

Haven't tried frogs or crayfish yet.
They had two large soft shelled turtles
and two hard shelled in the net.

Beautiful weather.

Zionville, Wis., July 30, 1930

Quercus bicolor

" *alba*

" *rubra*

" *macrocarpa*

" *coccinea*

Betula alba

" *nigra*

Acer saccharinum

" *douglasii*

Tilia americana

Ulmus americana

" *felpa*

Juniperus virginiana & *communis*

Ostrya americana

Fraxinus

"

Carylea alba

" *poticaria*

Juncus nigra & *cinerascens*

Populus deltoides, Tremuloids, grandidentata

Salix 5 species

Hackberry.

July 30

Took a day to write up reports
and do some collecting.

Austin got a *Syraptonius* and
a *Gapus*. Last night we had
more *Microtus austriacus*, 3 very
large ones, weighing 50, 47, and 44
grams.

Set more traps, hoping to get
Erethizon and *Sorex*.

A cool and perfect day.

Crabapple,

Hornapple,

Cornus alternifolia

" *circinata*

Corylus

Aleuranahis

Xanthoxylon

Staphylia

Rubus 3

Ribes 3

Rosa 2

6

Celastris scandens
Vitis riparia
Ampelopsis
Menispermum
Sindeling
Sterculia
Falcatia
Rhus glabra
 " *typhina*
 " *topicordata*
Ceanothus
Sarsaparilla
Spikenard
Ginseng
Acerum
Hepatica
Aquilegia
Thalictrum
Ferns 9
Mosses
grasses

July 31, Hurley C. Lawrence
 comes down to Lynntown with his
 water boat and took us down the
 river to the lower end of the
 Harper's Ferry bottoms and all
 around them and through many
 of the sloughs and lakes so
 we got a good idea of the
 country.

It is rather low and not much
 above extreme high water.
 About half of the areas are
 timber, mainly willow, cottonwood,
 maple, birch, elm, ash and
 on a few of the highest spots
 a few swamp oak and basswoods.

The lakes and sloughs are
 generally bordered with the
 three kinds of *sagittaria*,
 river rush, and in places
 lotus or white water lilies
 but the lotus is not so abundant
 or fine as up at Terpsichore.

Caught a Pitmeus and Austin
caught 3 half grown Synaptomys
and lots of others mice & shrews.
Lawrence brought us two Myotis keenii
septentrionalis from Terrellville.

Saw a wood chuck on a sand bar
in middle of a wide slough. He
was all wet and did not like
to cross across the other side
to the woods.

Fox squirrels are mainly on the
river flats. Gray squirrels mainly
on the bluffs.

I got a bulldog for lunch and
ate him legs and back and all. very good.
His stomach contained a young carp fish
about an inch and a half long and the
intestines remained of one that must have
been 2 inches long.

The muskrats have been
closely trapped and are scarce
but coon and mink tracks were
common. No wild rice was
seen and but little grass.
The muskrats were feeding mainly
on leaves and stems of Sagittaria
latifolia but in one place had
been eating the flowers and buds of
lotus.

There would be food for
a large number of beavers
but the country is not as
good for them as farther
north. There is little open
dry ground for turkeys and
prairie chickens but plenty
of good woodcock, wood duck
and other water bird range.

A few ducks, teal, sawbill
and wood ducks were seen.

August 1, 1930

Left Menomonie, Wisconsin
at 1 P.M. with Oliver Austin
in his little roadster and
arrived Prairie du Chene
inside of an hour. Crossed
the ferry to McGregor, Iowa
and drove up to the Wild Life
Sebowl on top of the bluffs
overlooking a wide stretch
of the Mississippi River
Bottoms. Found a little
cottage, "The Nester", just
right for us to be located
right there.

Austin decided to go
back to St. Paul to starved
before dark and expected
to be in St. Paul before
midnight.
A hot day.

Aug. 2 Got our baggage
from express office and
unpacked and got down
to work on reports and
specimens. Saw a little
of the country and got
our bearings for real
work.

Aug. 3. Sunday and very
hot. 100° all day in
the coolest part of our cabin
and 130° when I laid the
thermometer outside in the
sunshine on the grass.
Wrote letters and some
on reports. but did not
try to do much outside

Aug. 4. The Wild Life
School began at 9 AM
and I was called on for
a general outline of the
help we could give them
while here for a week.

In evening gave an
illustrated talk on the
Animal Life of the Miss.
Valley Wild Life Refuge
Wrote an report between
times.

Aug. 5, 1912 McGregor, Iowa
Mr. Reddington, Mr. Steele
and Capt. Miller came to
Morning Session of Wild Life
School and gave talks
I was asked to preside at
the morning session.

Aug. 6. Mr. & Mrs. Gregor
Mrs. Bailey gave a talk
on bird studies in morning
session and I gave talk
on Gravel Canyon in
evening with lantern slides.
Attended some important
lectures by Dr. Farnel
Dr. Schimel and Mr. Fitzsimmons.

Aug. 7, 19^o Gregor "a"
Beadlebone State Park beyond
Strawberry Point, on all
days trips by auto in
very rugged, interesting
country. Hot springs
bail out of the rocks and
make cold clear trout
streams and the state trout
hatchery is located here.
Many old natural white pines
occur and some other
northern plants and a
collection of small mammals
would be of great interest.
Good talk on beavers
in evening with motion pictures.

Aug. 8, Friday, M - Gregor.

Was asked to preside at morning session of the Wild Life School and gave a talk on hunting and trapping by the boys.

Was asked to preside at evening meeting so did not get much of my writing done but heard some good lectures by Dr. Pammel and Dr. Schimel.

Aug. 9 W.C. Fugos, Saturday
gave a talk in morning
on Predatory Animal Control
taking place ahead of Dr.
Bode who followed me with
an excellent talk on Conservation
of our forests.

Dr. Schimdt gave an excellent
talk on Surface geology in Iowa.
We had a bird class
in the morning from 6 to 7:30
and went on boat trips to the
Lotus beds in afternoon 4 to 7
with Captain Fred Bell
A cool and pleasant day
Evening talk by Dr. Kay on
glacial geology and singing by
the Cotton Flower Singers of Miss.

Aug 10 Sunday, Mc Gregor

Breakfasted with the Bickles at their cottage on the Ridge and walked over to the Golf Grounds by the woods trail along a north slope covered with dense vegetation, blackberries, spikenard, Sassafrass and ginseng under the tall trees. Many white birches and northern plants.

Saw one ruffed grouse and bellied woodpecker and other small birds.

The view from the river bluffs is superb, both north and south.

Aug. 11, Monday, M^cGregor
Left M^cGregor for Savanna
at 1:30 P.M., down the river
about 100 miles and across
to the Wisconsin side -
A cold morning and pleasant
day.

Followed down the Iowa
side of the Mississippi River
to Dubuque but found
the train went no further
so had to wait till 7:20
P.M. for a train to Savanna.

The river bottoms and
islands are about as at
M^cGregor but generally
not very extensive.
Forest and other vegetation
is rich and dense and
many fields of Lotus and
Sagittaria and Sedges are
passed.

Aug. 13 Tuesday, Savanna, Ill.

Arrived last night at 9:30 PM & came to the Radke Hotel. No word from our warden, Albert J. Cheney of Bettendorf, Iowa who was to meet me here. Arrived 10 AM and we started at once up the river along the edges of the Wild Cat Refuge areas on the Iowa side & the Military Proving Grounds Reservation on the Illinois side. Ran up to the administration building about 10 miles above Savanna and explained to Major Graham in charge that I wanted to go over the reservation to see what kinds of native game it was best adapted to. He detailed Capt. W. J. Henry to take us Mr. Cheney and myself, over

the Reservation which he did in
a very satisfactory way, showing
us all of it on the mainland
and sandy prairie and the edge
of the river bottoms.

It contains about 12000
acres, more than half of which
is on the prairie, possibly
4 or 5 thousand acres being on
the islands and bottomlands
of the Mississippi, on the east side.

The uplands are mainly
light sand with a flora of
eastern Nebraska including
prairie plants such as *Rhus*
trilobata, *Amorpha canescens*,
Artemisia ludoviciana, *Gnaphalium*
Sand cherry, *Ceanothus*,
Plantago bracteosa, *Opuntia vulgaris*,
Wild plum, chokeberry, black cherry,
grapes, elderberry, *Rhus glabra*,
Fragaria grass and *Andropogon*.

In places there are elms and oaks, maple, boxeldes, ash, birch, aspen, cottonwood and willows on low ground and junipers on the hills. prairie rose and black locust and Honey locust.

Meadowlarks - warbling doves vesper sparrow and swallows were abundant.

A badger den was in the road.
3 Woldoles, pigeons, were killed last winter.

Taxes of both kinds occur	
Mink,	common
Skunks - spotted & striped,	"
Raccoons	"
Moles	"
Mustards	abundant
Beavers	2

The Reservation is well adapted to Buffalo, Elk, antelope and deer, and there is a big man fence 10 feet high around several hundred acres where Buffalo, elk and antelope could be kept. A thousand white-tail deer could find food and cover to this being on the upland and bottomlands.

A few prairie chickens are still found on the prairie and some doves on the islands. Lots of bobwhite and a few ruffed grouse. Wild turkeys would do well and were native but many years ago.

The islands and bottomlands are well forested with Cottonwood, willows, elms, maples, birches, ash, boxeldis and shrubs and vines. For Grapes are very abundant.

There are many streams and lakes and marshes on the bottoms and wood-ducks and other ducks breed. Blue herons, black cranes and little green herons are common and a few yellowlegs and pretors sandpipers were seen and swallows of many species fairly swarm. Kingfishers are common and crows and woodpeckers.

Found old signs of beavers last winter and lots of cuttings and saw a few muskrats and lots of tracks. Corn and sunflower tracks are common. So are woodchucks.

Came on up to Bellvue at about 7 P.M. and stopped at the Hotel Weeks for the night.

The river is very low and we could not follow many of the streams through the refuge.

No lotus or wild rice seen.

One cave near Saranac, about a mile above. Bluffs not so high as farther north but were abrupt. Scenery beautiful in many places, especially so at Bellvue.

Night Hawks - a dozen at Bellvue
Swallows - 300 fallkirts "
Swifts - abundant "

The islands and bottomlands

Aug. 13, Left Bellvue 8 am for
Subjunc by motor boat.

Sycamore trees near Rishorus

Pin oaks, big trees on island "

Bream, one bearing tree 12
miles below Subjunc

4 elms

Cottonwoods

Willows

2 maples

Proposed 1

Ash 2 or 3

Zwart 2

Hardberry

At north end of Military river
a large tract of ancient forest of
magnificent elms, cottonwoods, pin
oaks, ash, maple and honeylocust
was valued at \$100 — acres and is
worth it tho' it would not sell
for that now.

Pine oaks are one of the best wood
duel woods. Wood ducks also are
said to eat wild grapes.

Two lotus lakes opposite
Bellevue, one on Military Refuge &
one on private land. They did
have wild rice but it died out,
supposed to be killed by carp.

The Iowa shoreline is abrupt
with the C.M.& St.P. Ry. along the
bank. In many places there right
of way runs from the river to top of
bluffs and includes valuable
game land all along from opposite
Savanna to Wabasha. Why not
get them to add this to the Wild
Life Refuge for protection of the
game with our wardens to
help patrol and protect it?
At present no hunting is allowed
on the right of way and it is
essentially a refuge.

The bluffs are well timbered with
oaks, walnut, hickory, Butternut,
beaswood, elm, maple,
boxelder & various berry bushes.
The trees are cut off between the
railroad and river where close.

The best thing about it is
is that it has passed.

The land from Belton to Dubuque
on the river bottoms and islands that
is not farm land but good
timber land is held at 30 or
40 to 60 or 100 dollars an acre
according to the stand of timber
on it. If without timber it has
little value. The soil is rich
and timber grows very fast &
very large.

Arrived at Dubuque at
11:30 and had to wait for a
train north till 4 PM. C.P.R.

Ran along Wisconsin side
of river to Prairie du Chene.
Good bottomlands and
islands. A big lake of lotus
flowers just south of Potosi.
Many lotus lakes

Cassville -

Redwing blackbirds, big flocks

One big Sycamore in Cassville

Reached McGregor 7 PM.

The best I have about the world

Aug. 14 Went from
Mc Gregor over to Prairie
du Chien and across the
mouth of the Wisconsin River
to the Nelson Dewey State
Park in Wisconsin in P.M.
Gave talk ^{in forenoon} on
Bird Life of the Wildcat
Refugee. Returned to
Mc Gregor at 6 P.M.

Aug. 15, Gave talk on
Bats at Wild Life School
in morning and a general
talk on the Wild Life School
in evening.

Crossed to Island and
lunched on river bottoms with
Mr. Rosen's col listed
birds over there, including
a flock of 24 Black ducks.

Aug. 14 Saturday,

Went for all day trip
up river on the steamer
Capitol as far as Hastings
at upper end of Wimashish
and returned to McGregor
at 6:30 P.M.

Talked of Wild Rice Refuge
and its possibilities most
of day to groups of people
on the steamer.

We saw the whole length
of the Wimashish Brothers
and had good views from
the upper deck.

A pleasant day and
very interesting people,
including the faculty and
students of the school.

Aug. 17, Sunday, Mc Gregor,
Packed up ready for start
early in morning.

In P.M. drove over to
Elkader with the Elwells
and called on Mrs. Bell
and her mother, Mrs. Preston
who was born there over 80
years ago and knows the
early days of the country
back to Indian and buffalo days.
Saw much beautiful farming country
with good crops and lots of
hogs and cattle.

Harrow is over and the
threshing mostly done.
Corn is full grown and a
good crop generally.
Clover is getting ripe and
buckwheat in blossom.

Aug. 18 Monday, M^o George,
Left M^o George 8:04 AM
on the C.M. & St. P. for Wivona
and came slowly with many
changes up the river valley
and much of the way up the banks.
Saw plenty of lotus up to near
La Crosse but none above.
White and yellow waterlilies are
abundant at Brosserville
and La Crescent & above.
Cardinal flowers abundant
near Reno on sandy bottoms.
Arrived at Wivona 11:15 AM
went to Hotel Wivona and to
the Wild life Refuge office.

Aug. 19 + 20
Writing reports at Wivona.

Aug. 21 - Finished manual report
and gave to Mr. Steele & have it
copied.

Went out to Woodlawn
Amesbury west of Lake Wivona
and saw a *Citellus l. lineatus* in
the cemetery and a dead one in
the road. Also a Red squirrel
and several gray squirrels
and a few gray & squirrels in
town. All ate the large, dark
billed *hypophaeus*.

The red squirrel was the first
found this summer. Was chattering
noisily in a tree. Many cones
seeds and cores were scattered over
the ground under spruce trees.

Cool and pleasant, very dry.

Aug. 22 Left Wixona at 11:30 AM and reached St Paul at 2:35 PM, up west side of river.

Country very dry, but grain all harvested and corn fairly well matured. Most of sloughs dried up and river very low. Hillsides all brown.

At St. Paul went direct to Old Capitol Bld. and saw the assistant game warden Mr. Forrest and arranged for taking the beavers as soon as the fair is over.

Also saw Thad Surber and talked of the mammals of the Wild Life Refuge.

Then continued to Minneapolis where we went to the Hastings Hotel, away out on 12th St near Hennepin and located for the night.

~~Aug. 23~~ Saturday.

Left Minneapolis on bus at 4 PM and reached Elk River at 5:15 PM, and drove out to Chautauk Hills.

Saw Dr. Roberts in evening and went to Museum and got supplies and Dr. Roberts agreed to find out about tags for beaver tails.

Aug. 24 to 29 at Elk River writing reports.

Aug. 30 - To Minneapolis and St. Paul to see Raphael John, Mr. Frazer and Dr. Roberts about field work.

Aug. 31, Sunday, Visiting among the old neighbors.

Aug. 31 Sunday at Chelles

Visited among the old friends
and neighbors and found some
new friends among the old residents.

A hot day, still dry

Sept. 1 Monday -

Left Meadow Vale at 7 AM and
drove to Princeton, Mill Lake and
Grand Rapids, then west to Cass Lake,
about 225 miles, arriving at 5 PM.

Struck Canadian zone between
Princeton and Willmar when the white
pine and jack pine begin and spruce
and tamarack swamps are abundant.
Norway pines and cedar swamps
and balsam begin at Lake Willmar
and continue the rest of the way.

Most of the old heavy white pine
and hemlock forest has been cut
and burned and some of the ground
charred but it is poor farm land.
Lots of wild hay grows naturally.

but it has little value.

Small farms do well as far as Mill Lake but not so well beyond though there are some fairly good farms as far up as Grand Rapids. Rehabilitation is retarded by repeated fires.

Logging is a thing of the past.

Reforestation, fir and spruce are things of the future.

Stopped in many places both in swamps and on uplands to see if any signs of snowshoe rabbits could be found but they are very scarce.

There are numerous old cuttings of three or two winters back but very few of last winter.

White cedar, aspen, service berry and willow had been cut but more cedar than any other.

Saw a fox squirrel at Millie Lake, ran across the road just ahead of us. Saw a little deer sign above Aiken.

One ruffed grouse had been killed by auto in road.

Lots of crow, black birds and a thousand swallows.

A cold day and raining in morning. Chilly and cold at night.

No trace of forest fires and only one peat fire - west of our river.

Sept. 3 Tuesday Cass Lake

Saw Supervisor Howard Hopkins first thing in morning and he sent G. K. Fenger with me to inspect tree plantings for rabbit damage on the Chippewa Nat. Forest.

Found many of the five year sets gone and many of those remaining injured or killed by recent hot dry weather.

Most of the little trees a foot high or less have been injured by having the twigs cut off by rabbits or deer 2 or 3 or four years ago. Showed him the difference in rabbit and deer cutting and gathered a bunch of twigs cut by each.

No signs of mouse work or gophers or squirrels.

Rabbits are very scarce now and were lost winter but were

About 1925, when great numbers of bushes and young trees were killed. Most of the small cedars and some little pines and spruces were then cut and injured a little.

The rabbits are partial to white oaks, bush maples, willow, hazel, copper, Rose, staghorn, serviceberry

Does are partial to bush maple, pin cherry, willow, hazel, copper, Service berry, honeysuckle and Ceanothus, of which the terminal buds are bitten square off and leaves of the pin cherry are scarcely eaten.

The rabbits cut larger sticks and slice them diagonally with both marks across the middle of the cut

No beaver signs could be found along Cass Reels.

Saw prof. Harry Shirley, studying effects of light on young trees

Also, the local game warden Mr. Wright who was going up to some beaver country above Black Duck.

Red squirrels are beginning to cut up pine cones to eat but not yet to star.

In PM went over to Itasca Park and Lake and photographed the shores of the Mississippi River.

The Park contains long areas of virgin timber, largely Norway pine.

Drove south to Dur Park and Wadena where we stayed over night.

Mrs. van over an old
hen ruffed grouse in middle of
road, one car passing close on
her right and we on her left
almost simultaneously but she
never took a step, turned around
and went back with camera but
went slow and she ran across
road and into woods, Then two
very young young flew up from
far edge of road and the rest
of her brood were behind so
she did not know which
way to go.

Many are killed in the roads
but need not be if drivers
were careful and tried to
avoid them. A penalty
should be enforced for killing
anything with auto.

Found a full grown male
mink in the road, run over by
by a car today, saved for specimen.
A few birds and one cottontail killed
in road, yesterday a ruffed
grouse, a pair of snakes
birds and rabbits -

Sept. 3 Wednesday.

Returned from Wadena
via Lake Center and St. Cloud
to Elk River, through mainly
good farming country along
the edge of the big prairies.
Saw a number of large lakes
not known on the road map.

Found dead female rabbit
in road run over by automobile
and skinned for specimen.

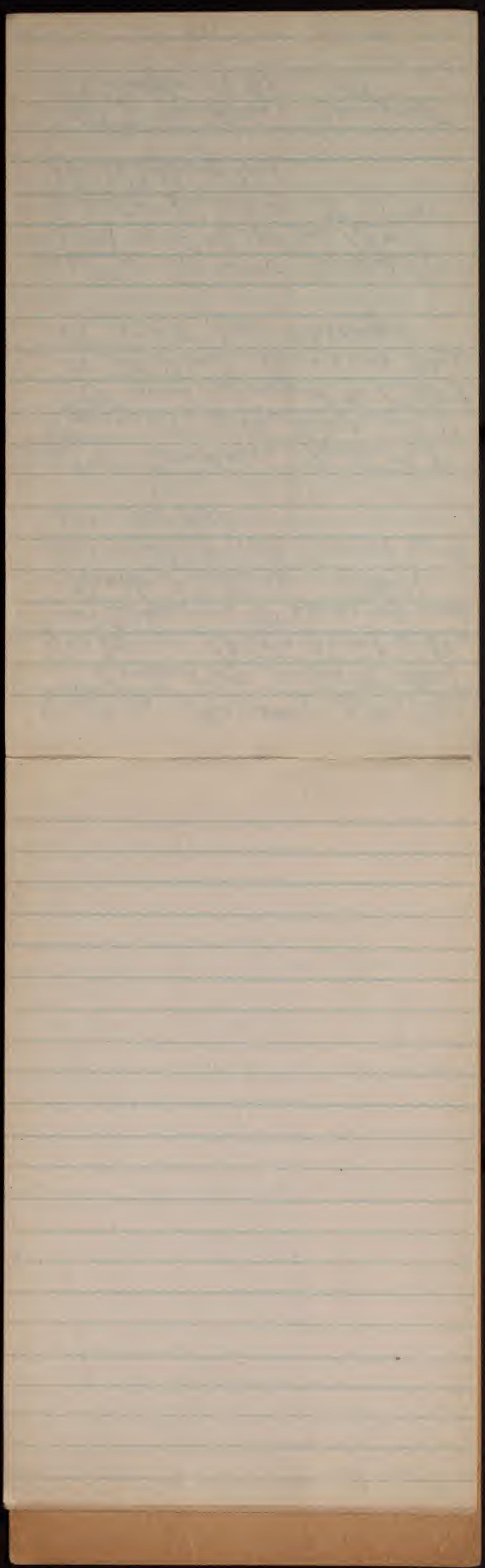
Saw several muskrats, ground
squirrels, gray squirrels,
cottontails, mice, kids,
pugs and turtles, and many
birds run over.

Sept. 4 Thursday, Elk River,
Packed up ready to start
for home. Wrote final letters
and telegrams to close up work.
Received letter from Etelle
canceling all beaver work
on refuge.

Sept. 5 Friday, Took N.P.
train at Elk River, at 7
PM and changed to C B & Q
at St. Paul, leaving there
at 8:45 for Chicago

Sept. 6, Arrived Chicago 8:10
AM and left on B & O.
Capitol limited at 1 PM
for Washington.

Sept. 7 Sunday. Arrived
Washington 9:30 AM



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BUREAU OF BIOLOGICAL SURVEY.

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